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Treatment of Dental Diseases in Gypsum Workers at Productive Enterprises

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RELEVANCE

To date, a number of somatic diseases are known, which, as a rule, have characteristic manifestations on the oral mucosa (pneumoniosis, bronchial asthma, GERD, peptic ulcer of the stomach and duodenum, diabetes mellitus, arterial hypertension, etc.). The combination of chronic nonspecific lung diseases and chronic periodontitis is noted in 17.7-28.0% cases (Luzin N.M. et al., 2003; Gorbacheva I.A., 2004). In this regard, it is of interest to study the oral cavity against the background of diseases of the upper respiratory tract, since gypsum dust can cause irritation of the eyes and respiratory tract, therefore, care should be taken in advance to protect the employees of the gypsum production plant.

KEYWORDS: *Dental Diseases, Productive Enterprises, Gypsum Workers.*

The lack of drywall can manifest itself over time, as the gypsum that is part of it turns into dust, which can become a problem for the respiratory system. However, the large-scale extraction and processing of gypsum, which is underway now, cannot but affect the environment. The environmental problem is one of the most acute problems in the whole world, it is also relevant for our region. But just getting gypsum is not enough, it needs to be processed at the enterprise. The harmful substances emitted into the air interact with each other and create an unfavorable environmental background for the workers of this plant. Any dust has a bad effect on the human body, because it consists of solid particles entering the respiratory tract. If we keep in mind pure gypsum as a mineral, then it itself is probably harmless. However, in nature gypsum is extracted from rock, and it contains many other impurities.

Gypsum is hydrated calcium sulfate $CaSO4*2H2O$, but in deposits it is found in various forms and is often associated with other minerals such as quartz. Workers engaged in gypsum extraction had pneumoconiosis; its occurrence is attributed to silica impurities found in deposits. Gypsum dust can cause irritation of the eyes and respiratory tract. Plaster particles that get on the skin can cause irritation (Gavrilenko N.2015). A chronic process in the lungs leads to a decrease in the overall immunological reactivity of the body, which can provoke an exacerbation of inflammatory periodontal diseases (Ipatova E.V., 2003; Mikhaleva L.M. et al., 2004; Shikhnobaeva E.D., 2007). Chronic obstructive pulmonary disease is accompanied by the development of systemic hypoxia, and against the background of existing metabolic disorders, oxygen deficiency in periodontal tissues additionally inhibits regenerative and reparative processes (Bezrukova A.P., 2000), while microcirculation is impaired (Orekhova L.Yu. et al., 2004), which leads to the initiation of destructive processes in periodontal tissues.

The mucous membrane of the oral cavity is almost always involved in the pathological process of various diseases and pathological conditions. However, the nature of these changes is very different depending on the etiology, on the individual characteristics of the organism, age, physical condition, genetic status, etc. In this regard, the diagnostic value of the symptoms of changes in the mucous membrane, as well as the therapeutic and preventive tactics of the doctor will be different.

The connection between foci of chronic odontogenic infection and an increased risk of developing

chronic obstructive bronchitis was revealed. Foci of infection in the tissues of the oral cavity can serve as a reservoir for colonization of respiratory microbes that cause the development of pneumonia, and periodontal damage of an inflammatory and destructive nature can sensitize the body and thereby aggravate the course of the chronic process in the bronchi [17.19.21].

The purpose of the study. Study and assessment of the oral cavity condition of gypsum workers at productive enterprises, as well as optimization of treatment and prevention of dental diseases in them.

Research objectives

1. Study and evaluation of dental morbidity in gypsum workers at productive enterprises, depending on the degree of harmfulness of production.
2. Comparative characteristics of clinical features of the course of dental diseases in employees of these organizations.
3. Assessment of the influence of harmful factors of gypsum production on the state of local immunity and microbiocenosis of the oral cavity of workers.
4. Determination of the main risk factors for the development of dental diseases in workers and assessment of their impact on the condition of the oral cavity.
5. Determination of the correlation relationship between the degree of harmfulness of production and the state of the oral cavity in gypsum workers of productive enterprises.
6. Determination of the quality of life of employees of this production and its assessment depending on.
7. Development of ways to optimize the treatment and prevention of diseases of the oral cavity of gypsum production enterprises.

Thus, during a comprehensive dental examination of workers in the production of organochlorine herbicides, a high intensity of dental caries was established, associated by the authors with work experience and the degree of contact of workers with xenobiotics. The average and severe degree of periodontal lesion in workers with more than 20 years of work experience and in laboratory workers was almost twice as high as in the control group. A mild degree of periodontal lesion prevailed in the first and second groups by experience. With increasing length of service, the hygienic condition of the oral cavity worsens almost 5 times and is assessed in the first group as unsatisfactory, and in the 2nd and 3rd as bad.

A direct relationship was also revealed between the severity of diseases of the oral mucosa, the duration of exposure and the degree of contact of workers with chlorphenoxygerbicides. There is a tendency to develop hyperkeratosis: cheilitis, hyperkeratosis of the red border of the lips, the mucous membrane of the cheeks and tongue, a flat form of leukoplakia of the red border of the lips and the mucous membrane of the cheek. In the course of the study, a decrease in the humoral component of immunity was revealed, due to a decrease in the level of lysozyme and sIgA. Pathological erasability and a wedge-shaped defect were diagnosed from non-carious lesions of the oral cavity. When studying periodontal tissues, it was found that with an increase in work experience, the number of people with intact periodontal disease decreased. Allergic cheilitis, traumatic lesions of SOR, aphthous stomatitis, foci of hyperkeratosis, directly correlating with the length of service of employees, were most often found among the diseases of SOR [1.3.5.7.9.11].

The highest rate of dental morbidity was found in workers of the boiler and turbine shop with 5-10 years of work experience. Also, relative to the indicators of the control group, there is a low level of secretory immunoglobulin A in the oral fluid of workers. In the main group, the concentration of saliva lysozyme was significantly higher than in the control group. In the main group of workers, in

contrast to the control group, the pH shifts to the acidic side [17.19.21].

As a result of the study, preventive measures were developed to improve working conditions and health indicators of employees. A high prevalence of dental diseases has also been diagnosed in workers of petrochemical production. The prevalence of pathological processes in periodontal tissues was 100%, dental caries - 99.1%, pathologies of the oral mucosa - 58.7%. The low hygienic level of the oral cavity was revealed. When studying the concentration of immunoglobulins b^A, 1§A, 1§M, 1§0, B and lysozyme in the oral fluid it was found that all workers with periodontal disease have local humoral immunodeficiency [2.4.6.8.10.12].

Dental examination of workers in the production of mineral fertilizers there is an increase in the prevalence and intensity of inflammatory diseases of periodontal tissues with an increase in the time of contact with xenobiotics. Most often, signs of bleeding gums and tartar were found. The workers had a higher level of COP diseases - 94.5±5.5% (control group - 55.5±4.5%), among which there were such diseases as traumatic lesions of COP, chronic recurrent aphthous stomatitis, chronic herpetic stomatitis, meteorological cheilitis, desquamative and hyperkeratotic glossitis. Also, in the group of employees of this production from 25 years and older, high values of the intensity of caries are observed. Along with the high rates of sealed teeth, some researchers attribute this fact to the high frequency of tooth extraction due to pathological processes in periodontal tissues [9.11.13.17.19.21].

Lesions of the hard tissues of the teeth were found in 100% of cases. High values of the CPI index were diagnosed in workers of particularly dangerous industries (18.4±3.3). Most often, complete destruction of the crown part of the tooth was detected. The prevalence of diseases of the oral mucosa reached 27.4%, which was 2 times higher than the corresponding indicator in the control group [10.12.14.16.18].

The dependence of the prevalence and intensity of carious lesions of the teeth on the work experience was considered in the workers of the gas processing plant. It turned out that the overall prevalence of the carious process was 90.5%, the intensity was 10.05 ± 1.05. Depending on the length of service, the values of these indicators increased. In workers with experience from 0 to 5 years, the prevalence of caries was 86.5%, the intensity of caries was 8.2± 0.69, and with work experience of more than 15 years - 96.0% and 16.7± 1.02, respectively [17.19.21].

The analysis of dental diseases among employees of aluminum industry enterprises in cases of disability over the past 5 years has shown that the main share of disability sheets are pathological processes of the oral cavity (58.65%). This fact is a confirmation of the need for planned sanitation of the oral cavity in industrial workers [18.19.20.21].

For the first time, a comparative study of the dental status of Bukharagips workers with diseases of the upper respiratory tract will be conducted, the inflammatory reaction in the oral cavity and bleeding are less pronounced against the background of severe destructive bone lesions.

A direct relationship will be revealed between the severity of the course of upper respiratory tract diseases, the level of oral hygiene and the degree of periodontal inflammation in Bukharagips workers.

The clinical manifestations of dental diseases in Bukharagips workers will be evaluated against the background of upper respiratory tract disease therapy and an algorithm for the management of patients with combined pathology will be developed.

To develop practical recommendations for the provision of dental care for Bukharagips workers with COPD. Formulate measures to protect the environment and human health from the negative effects of gypsum production and the use of gypsum, develop preventive measures.

1. As a result of the conducted research, new data will be obtained on the features of inflammatory diseases of the oral cavity in workers of Bukharagips with chronic obstructive pulmonary disease. In accordance with them , to develop individual programs for the treatment and prevention of oral diseases in workers of Bukharagips .
2. In the treatment of patients, special attention should be paid to the normalization of microcirculation in the soft tissues of the oral cavity. For the prevention of exacerbation of chronic obstructive pulmonary disease, patients are recommended to systematically conduct professional oral hygiene and timely treatment of exacerbations of COPD.
3. When hospitalizing patients for exacerbation of chronic obstructive pulmonary disease during the treatment of the underlying disease, it is recommended to consult a dentist and professional oral hygiene.
4. It should be borne in mind that with a severe oral cavity disease, only a temporary improvement may occur as a result of conservative treatment.
5. Patients with chronic obstructive pulmonary disease, especially those working in a gypsum production plant, are at risk (for diseases of the oral cavity and upper respiratory tract) both inflammatory and non-inflammatory in nature. In this regard, once every 3 months, the plant's employees must undergo examinations by dentists and pulmonologists.
6. Features of oral cavity changes in gypsum production plant workers with concomitant diseases of the upper respiratory tract
7. The results of the study will be used in the educational process to improve the quality of training of students, ardinators, masters and practicing dentists
8. Implementation of the obtained data in practical healthcare to reduce the proportion of stomatological oral diseases not only in gypsum production plant workers and in other workers of the industry.

Non-carious pathology of the hard tissues of the teeth was 65%. As the length of service in harmful conditions increased, the observed workers increased the intensity of non-carious lesions of the hard tissues of the teeth: pathological erasability, wedge-shaped defects, erosion and cracks of the enamel. The prevalence of periodontal diseases of periodontal diseases is significantly higher in the main group compared to the control group (65.0% vs. 35.0%, respectively). At the same time, gingivitis was observed in 16% of cases in the control group, au of workers only in 3.9%, and a more severe form of the disease - periodontitis was almost 1.5 times more common in workers associated with harmful working conditions.

Conclusion. The dependence of the severity of periodontal diseases on the length of service in persons of the main group has been established: a mild degree of periodontitis is observed mainly with less experience and is not diagnosed in persons who have worked for more than 24 years. The average severity of periodontitis is observed in 18.0% of people with work experience from 24 to 44 years. The largest number of people with severe periodontitis was found among people with more than 30 years of work experience (12%). The results of the conducted research dictate the need to improve and optimize an individual approach to providing dental care to employees exposed to harmful professional factors.

USED LITERATURE

1. Norova M.B., Teshaev Sh.J., Baymuradov R.R. Antropometric parameters of the head and maxillofacial part in the children with diabetes mellitus and its compliance to the principle of the golden ratio // European Sciences review. Vienna, 2014, № 9-10. – P. 64–66 (14.00.00, № 19).
2. Ядгарова Г.С., Норова М.Б., Тешаев Ш.Ж., Каюмов Х.О., Суюнова М.Х. Табиий ва сунъий озиқлантирилган олти ёшли соғлом болалар юзи ва пастки жағ бурчаги морфометрик параметрлари // O`zbekiston tibbiyot jurnali, 2014, № 6. – 102–105 б. (14.00.00, № 8).
3. Ядгарова Г.С., Тешаев Ш.Ж., Норова М.Б., Баймурадов Р.Р., Тешаев У.Ш. Табиий ва сунъий озиқланишда бўлган уч ёшли соғлом болалар бош ва юз-жағ соҳаси морфологик кўрсаткичлари, уларнинг «олтин пропорция» қонуниятига мослиги // Toshkent tibbiyot akademiyasi axborotnomasi, 2014, № 4. – 60–62 б. (14.00.00, № 13).
4. Тешаев Ш.Ж., Ядгарова Г.С., Норова М.Б. Корреляционная связь показателей физического развития и объема яичек детей и подростков // Научно-практическая конференция с международным участием «Мужское здоровье – здоровое поколение» / Биология ва тиббиёт муаммолари. – Самарканд, 2016, № 4.1 (92). – С. 99 (14.00.00, № 19).
5. Тешаев Ш.Ж., Норова М.Б., Баймурадов Р.Р., Намозов Ф.Ж. Программа для оценки морфометрических показателей головы у здоровых детей и с сахарным диабетом 1-го типа // Свидетельство об официальной регистрации программы для электронно-вычислительных машин № DGU 02903 от 03.04.2013 г.
6. Комилов Х.П., Норова М.Б. Применение квертицина в комплексном лечении рецидивирующего афтозного стоматита // Сборник Республиканской научно-практической конференции с международным участием «Актуальные проблемы стоматологии». – Бухара, 2012. – С. 63.
7. Тешаев Ш.Ж., Ядгарова Г.С., Норова М.Б., Рузиева Н.К., Якубов Ш.Н. Соглом болаларда юзнинг морфометрик ўлчамлари ва уларни олтин пропорция қонунига мутаносиблиги // Доктор ахборотномаси. – Самарканд, 2012, № 2. – 156-157 б.
8. Норова М.Б., Ядгарова Г.С., Исмаилов А.Х., Суюнова М.Х. Профилактика кариеса у детей и подростков // Стоматологиянинг долзарб муаммолари, туплам. – Бухоро, 2012. – 97 б.
9. Норова М.Б., Ядгарова Г.С., Исмаилов А.Х., Суюнова М.Х. Требования к зубным пастам для детей самого младшего возраста // Стоматологиянинг долзарб муаммолари, туплам. – Бухоро, 2012. – 97 б.
10. Ядгарова Г.С., Норова М.Б. Гормональный статус слюны и липидного спектра крови у больных пародонтитом с отягощенным ожирением // Стоматологиянинг долзарб муаммолари, туплам. – Бухоро, 2012. – 151 б.
11. Ядгарова Г.С., Тешаев Ш.Ж., Норова М.Б., Тешаев У.Ш., Ополовникова К.С. Морфометрические параметры лица и углов нижней челюсти у 6 летних здоровых детей находившихся в искусственном и естественном вскармливании // Проблемы биологии и медицины. – Самарканд, 2013, № 2 (73). – С. 98–101.
12. Ядгарова Г.С., Тешаев Ш.Ж., Камалова Ш.М., Норова М.Б., Ширинов Дж.Н., Каюмов Х.О., Намозов Ф.Ж. Показатели физического развития и морфометрические параметры челюстно-лицевой области у детей живущих в климатически не благоприятных районах // Материалы XV международной конференции «Экология и развитие общества». – СПб., 2014. – С. 186–188.

13. Тешаев Ш.Ж., Ядгарова Г.С., Норова М.Б., Тешаев У.Ш. Анатомические параметры лица и углов нижней челюсти у 6-летных здоровых детей, находившихся в искусственном и естественном вскармливании // Научно-теоретический медицинский журнал «Морфология». – СПб., 2014, № 3 (т. 145). – С. 193.
14. Ядгарова Г.С., Норова М.Б., Баймурадов Р.Р. Диагностические критерии сахарного диабета у детей по морфометрическим показателям головы и челюстно-лицевой области // Проблемы биологии и медицины. – Самарканд, 2015, № 4. – С. 111.
15. Тешаев Ш.Ж., Норова М.Б., Ядгарова Г.С., Баймурадов З.З., Тухсанова Н.Э., Хожиев Д.Я., Тешаев У.Ш., Хасанова Д.А. Морфометрические параметры головы и челюстно-лицевой области у детей с сахарным диабетом и их соответствие принципу «золотой пропорции» // Научно-теоретический медицинский журнал «Морфология» – СПб., 2016, № 3. – С. 204.
16. Норова М.Б., Тешаев Ш.Ж. Параметры физического развития и антропометрические показатели краниофациальной области детей с сахарным диабетом / Биология ва тиббиёт муаммолари. – Самарканд, 2018, № 2 (22) – С. 186–188.
17. Норова М.Б., Тешаев Ш.Ж. Қандли диабет билан оғриган 9 ёшли болаларнинг бош ҳамда юз-жағ соҳасининг антропометрик кўрсаткичлари // Тиббиётда янги кун, 2018, № 2.
18. Шамирзаев Н.Х., Тешаев Ш.Ж., Норова М.Б., Ядгарова Г.С., Баймурадов Р.Р. Сравнительная характеристика морфометрических параметров головы и челюстно-лицевой области у детей с сахарным дабетом // XIV Конгресс МАМ Астрахань, 2018 / Морфология, 2018, № 3. – С. 313.
19. Норова М.Б. Методические рекомендации «Антропометрические параметры головы и челюстно-лицевой области детей с сахарным диабетом и их связь с показателями физического развития», 2018.
20. Norova M.B., Xabibova N.N**.** J. DEVELOPMENT OF PREVENTION AND TREATMENT OFINFLAMMATORY DYSTROPHIC PERIODONTAL DISEASE IN WORKERS OF GYPSUM PRODUCTION PLANT WITH DISEASES OF THE UPPER RESPIRATORY TRACT// INTERNATIONAL JOURNAL ON HUMAN COMPUTING STUDIES. Volume: 02 Issue: 6 November-December 2020. P.38 – 40
21. Mavjuda Bahodurovna Norova DENTAL STATUS OF ORAL CAVITY OF BUKHARAGIPS WORKERS, DEVELOPMENT OF WAYS OF PREVENTION // Europe's Journal of Psychology, 2021, Vol. 17(3), 75-77